

REMARKS

Claims 1-17 are currently pending in this application, as amended. By the present amendment, claims 2 and 4 have been amended to address formalities. Additionally, paragraphs [0008] and [0012] of the specification have been canceled as they only provide references to specific claim numbers in the Summary section of the application. Applicant respectfully submits that no new matter has been introduced into the application by these amendments.

CLAIM REJECTIONS – 35 U.S.C. §112

Claims 4 and 6 were rejected under 35 U.S.C. §112, second paragraph, as indefinite.

Specifically, the Action questioned what part of the power transmission drive prevents full-load operation of the internal combustion engine.

In response, claim 4 has been amended to indicate that the device prevents operation of the internal combustion engine above the lower power level for a disruption in a function of the fuel pump. This is consistent with claim 1 and the specification as published in U.S. 2006/0178240 at paragraph [0006], which indicates that the engine operates for example, in a partial-load operation in connection with a limit in RPM, as well as paragraph [0011] which indicates that the operation of the internal combustion engine is at a lower power level. See also paragraphs [0015], [0016], [0023] and [0044]. Accordingly, withdrawal of the Section 112 rejection of claims 4 and 6 is respectfully requested.

Applicant also notes that the amendment to claim 2 is only to delete reference element number 26 which was missed in the prior amendment.

CLAIM REJECTIONS – 35 U.S.C. §102

Claims 1, 3, 8, 10 - 14 and 17 were rejected under 35 U.S.C. §102 as anticipated by JP 62-035154 to Kadota et al. Applicant respectfully traverses this rejection.

Claim 1 is directed to a power transmission drive including a synchronous drive for an internal combustion engine with which a rotating angle between a driven member and a drive member can be detected. A member of the power transmission drive includes an electronic controller which interacts with a control system of the internal combustion engine. A sensor, comprising a transducer, detects an oscillating angle deviation, a rotating angle deviation, an irregularity in RPM, or a correcting movement between the driven member and the drive member and sends a signal to the controller which calculates a control parameter. After a defined limit value is exceeded, the controller initiates an emergency program of the internal combustion engine to operate the internal combustion engine at a lower power level.

In contrast to the present invention, Kadota et al. specifically teaches that, upon receiving the high level signal S "the engine output limiting portion 51b limits an increase in output of an engine to prevent the occurrence of the gear skip in the timing belt 41." To the extent that the limiting of the increase in output of an engine based on the high level signal being exceeded is considered to be an emergency program, this does not meet the present claim requirement that once a defined limit value is exceeded for a control parameter that an emergency program of the internal combustion engine operates the internal combustion engine at a lower power level. Kadota et al. teach that the output of the engine can be maintained at its same level, which is the same level causing the problem. There is no suggestion or disclosure to decrease the power level in order to extend the

operating time of the internal combustion engine at a lower power state so that the operator can reach a service station or otherwise continue operating the vehicle at the lower powered state in order to come to a safe area for pulling over or for service, if possible. There is nothing to suggest or disclose this difference in Kadota et al. which merely teaches limiting and an increase in power output of the engine rather than decreasing the output of the engine and running in an emergency operating state at lower power. Accordingly, withdrawal of the Section 102 rejection of claim 1 is respectfully requested.

Claims 3, 8, 10-14 and 17 depend directly or indirectly from claim 1 and should be similarly patentable for the reasons noted above in connection with claim 1.

CLAIM REJECTIONS – 35 U.S.C. §103

Claims 2 and 7 were rejected under 37 U.S.C. §103 as unpatentable over the combination of Kodota et al. and JP 2003/184682 to Inada. Applicant respectfully traverses this rejection.

Claim 2 depends from claim 1 and further recites that the free engine clutch is allocated to the driven member or the drive member to prevent an accelerated angular velocity of the power transmission drive.

Inada is cited as teaching a fuel injection pump with a free engine clutch to prevent reverse rotation. However, Inada does not address the deficiencies noted above with respect to Kadota et al. with respect to claim 1. Accordingly, claim 2 should be patentable over this combination.

Claim 7 also depends from claim 1 and would be patentable over this combination for the same reasons as noted above in connection with claim 1.

Claims 4-6 and 15 were also rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. and Inada. Claim 4 depends from claim 3 and recites that the power transmission drive includes as a drive member, a fuel pump which is in connection with an associated sensor, the controller and the free engine clutch. The device prevents operation of the internal combustion engine above the lower power level for a disruption in a function of the fuel pump.

As noted above, Kadota et al. fail to teach a controller that initiates an emergency program of the internal combustion engine to operate the internal combustion engine at a lower power level. To the extent that Inada is cited as teaching a free engine clutch (50) used in connection with a fuel pump (40), the claim limitations are still not met by the combination. In addition to the deficiency of Kadota et al., Inada merely provides a one-way clutch to prevent a reverse rotation of a fuel pump. In contrast, according to the present invention, when the free engine clutch or fuel pump fail during operation, the engine power is lowered so that it can continue to operate to provide fuel necessary for the engine to operate at a lower power level while at the same time not causing an overall failure of the power transmission drive due to the timing belt stretching or failing based on the increased load caused by the defective fuel pump or failed free engine clutch. Thus, rather than merely preventing a reverse rotation as provided by Inada or preventing an increase in the output of the engine as taught by Kadota et al., the present invention provides for a continuing function at a lower power level of the internal combustion engine as the fuel pump is failing so that a service station can be reached. In view of these differences, claim 4 should be patentable over this combination.

With respect to claims 5, 6 and 15, these claims depend directly or indirectly from claim 1 and should be patentable for the reasons noted above in connection

with claim 1 regarding the deficiencies of Kadota et al. as they are not addressed by Inada. Accordingly, withdrawal of the Section 103 rejection of claims 5, 6 and 15 is also requested.

Claim 9 was rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. and JP 62-180157 to Inagaki et al. Applicant respectfully traverses this rejection.

Claim 9 depends from claim 1 and should be similarly patentable for the reasons noted above in connection with claim 1. While Inagaki et al. is cited as teaching a controller that sends an optical signal if an optical angle deviation or rotation angle deviation exceeds a limit value, it does not address the deficiencies noted above with respect to Kadota et al. Accordingly, withdrawal of the Section 103 rejection of claim 9 is respectfully requested.

Claim 16 was rejected under 35 U.S.C. §103 as unpatentable over the combination of Kadota et al. and U.S. 2004/0251758 to Wilmore. Applicant respectfully traverses this rejection.

Claim 16 depends from claim 1 and should be patentable for the reasons noted above in connection with claim 1. Wilmore is cited as teaching a starter generator which can be run in both the starting mode and the generator mode. However, this reference is silent with respect to the deficiencies of Kadota et al. Accordingly, withdrawal of the Section 103 rejection of claim 16 is respectfully requested.

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CONCLUSION

If the Examiner believes that any additional minor formal matters need to be addressed in order to place the present application in condition for allowance, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience in order to address any such matters.

In view of the foregoing amendments and remarks, Applicant respectfully submits that the present application, including claims 1-17, is in condition for allowance, and a Notice to that effect is respectfully requested.

Respectfully submitted,

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